IN THE CLAIMS:

1-15. (cancelled)

16. (new) A method of making a shaped body out of ceramic material, comprising the steps of:

stirring a metal oxide powder and a metal powder in a colloidal sol into a slip and consolidating the slip in a mold into a green product by freeze-gelling; and

sintering the green product in an active atmosphere which enables the metal powder to oxidize to form the shaped body.

17. (new) A method of claim 16 wherein the green product is sintered under an oxygen atmosphere.

18. (new) A method of claim 16 wherein the slip is doped with a reinforcement.

19. (new) A method of claim 18 wherein the reinforcement comprises a ceramic fiber or fibers comprising oxide, carbide, or nitride fibers.

20. (new) A method of claim 16 wherein the slip is doped with a conductive material.

21. (new) A method of claim 20 wherein the doped conductive material comprises silicon carbide.

22. (new) A method of claim 16 wherein the slip is doped in a targeted manner with carbon or carbon fibers.

23. (new) A method of claim 16 wherein a substance which determines surface characteristics of the later shaped body is infiltrated into the green product.

24. (new) A method of claim 23 wherein said substance comprises silanes, siloxanes, sols, a metal melt, a glass melt, or a slip.

25. (new) A method of claim 16 wherein a substance which determines surface characteristics of the later shaped body is infiltrated into the shaped body, and the shaped body is then fired again.

26. (new) A method of claim 25 wherein said substance comprises silanes, siloxanes, sols, a metal melt, a glass melt, or a slip.

27. (new) A ceramic shaped body of ceramic material manufactured by the steps of:

stirring a metal oxide powder and a metal powder in a colloidal sol into a slip and consolidating the slip in a mold into a green product by freeze-gelling; and

the green product being sintered in an active atmosphere which enables the metal powder to oxidize to form the shaped boy.

28. (new) A method of using a shaped body of ceramic material where said shaped body is manufactured by the steps of stirring a metal oxide powder and a metal powder and a colloidal sol into a slip and consolidating the slip in a mold into a green product by freeze-gelling, and sintering the green product in an active atmosphere which enables the metal powder to oxidize to form the shaped body, said use comprising aerospace engineering, microsystems engineering, refractory engineering, biotechnology, or casting.

29. (new) A method of claim 28 wherein the method of use comprises casting molds.

30. (new) A method of claim 29 wherein the use in casting molds comprises high-precision molding.

31. (new) A method of claim 28 wherein the use comprises a heat exchanger.

32. (new) A method of claim 28 wherein the use is in biotechnology for chromatography.

33. (new) A composite component, comprising:

a ceramic shaped body;

a substrate;

said ceramic shaped body being manufactured by the steps of storing a metal oxide powder and a metal powder in a colloidal sol into a slip and consolidating the slip in a mold into a green product by freeze-gelling, and sintering the green product in an active atmosphere which enables the metal powder to oxidize to form the shaped body; and

adding an amount of metal powder to the slip for the shaped body to cause a volume change during sintering which is employed for a press fit between the shaped body and the substrate.